ABSTRACT OF THE DISCLOSURE

A method of forming a membrane for use in conjunction with a semiconductor carrier and the membrane which includes an electrically insulating substrate and an interconnect pattern formed on the substrate. A stud is coupled to the interconnect pattern over the substrate by forming a gold ball, preferably by gold ball bonding techniques, and coating a portion of the gold ball with a compliant material, preferably an epoxy resin. The coating is filled with a material having sufficient hardness to be capable of penetrating the oxide film on the contact pads of semiconductor devices. The flakes are preferably silver or silver-based.